

Engineering Brief # 7

Date: September 12, 1975

In Reply Refer To: AAS-580

Subject: Engineering Briefs Numbers 6, 7, and 8

From: Acting Chief, Airports Engineering Division, AAS-500

To: All Regions

Attn: Chiefs, Airports Divisions

The subject engineering briefs are enclosed for your information. Engineering Brief No. 6 describes the use of a heater planer to correct pavement unevenness at San Juan International Airport, Puerto Rico. Engineering Brief No. 7 describes the procedures used in the construction of a rubber asphalt friction course at Peterson Field, Colorado Springs, Colorado. Engineering Brief No. 8 reports on the condition of porous friction course runways at Hot Springs, Virginia, and Greensboro, North Carolina.

The purpose of engineering briefs is to keep FAA field offices informed of airport construction methods which are being tried in one or more regions, but which are not necessarily known to other regions or ADO's. The information contained in the briefs is not to be construed as a general approval by Airports Service of the described technique. Instead, it will usually indicate that the technique has been approved by the region on a trial basis after concurrence by Airports Service.

ORIGINAL SIGNED BY:

E. DONALD BAUER

Enclosures

ENGINEERING BRIEF NO. 7 - RUBBER ASPHALT FRICTION COURSE
AT PETERSON FIELD, COLORADO SPRINGS, COLORADO

On June 18, I inspected a rubber-asphalt friction course which was being constructed on Runway 17-35 at Peterson Field. Its primary purpose is to improve runway friction and reduce the potential for hydroplaning. The project is being funded under ADAP.

FAA participants in the inspection included Will Koliha and Bill Moore of ARM-600, Bill Carson of ACE-600, Ken White of the Denver ADO, and Henry Whelen of the Pierre, South Dakota ADO. The inspection was conducted by airport manager Frank Ladwig and members of his staff. Contractors for the project included the Schmidt Construction Company of Colorado Springs, and Sahuaro Petroleum Company of Phoenix, Arizona (supplier of rubber-asphalt).

There has been considerable interest in the rubber-asphalt friction course since its successful application to runways and taxiways at

Sky Harbor Airport (Phoenix) beginning in 1966. The friction course has not only resulted in marked improvement of runway surface friction but has also succeeded in sealing over pavement cracks. It was because of this Sky Harbor success that the sponsor of Colorado Springs and the Denver ADO decided on its use at Peterson Field.

The area being treated on Runway 17-35 was 150' x 9700'. The placement procedure was as follows. The rubber-asphalt material was spread on the runway surface by bituminous distributor trucks at a rate of 1/2 gallon per square yard for a thickness of about 1/4 inch. Application temperature was about 325 degrees F. Immediately after placement of the rubber- asphalt, 1/4 inch precoated aggregate was spread at a rate of 25 pounds per square yard. The cover aggregate was then compacted by pneumatic rollers with a minimum of four complete passes. After rolling and curing, the surface was swept with power brooms to remove loose aggregate. Prior to placement, the existing runway surface was tacked with emulsified asphalt and cracks were cleaned and filled with the rubber-asphalt material.

The rubber-asphalt friction course was completed in 4 days. Equipment included 2 bituminous distributors, 8 aggregate trucks, and 3 rubber tired rollers. The cost was 87 cents per square yard.